REMARKS ON GENITALIC CHARACTERS OF SOME PAPILIOS OF THE MACHAON-GROUP (LEPIDOPTERA: RHOPALOCERA).

By Waro Nakahara, Tokyo, Japan.

The relationship of various forms of the Nearctic Papilios of the *machaon*-group has been the source of much discussion among lepidopterists. It seems to be the generally accepted opinion, however, that the species *machaon* is represented in North America by a single subspecies, *aliaska* Scud., other allied forms, such as *bairdii* Edw. and *zelicaon* Luc., being listed as species distinct from *machaon* L. An inspection of specimens leaves one somewhat in doubt as to the taxonomic status of these forms, because of the striking similarity of wing markings existing among them. Verity, in his Rhopalocera Palaearctica, discussing the phylogenetic relationship of the forms of *machaon,* remarks that "*zolicaon*" and "*oregonia*" of North America are in all probability geographical races of *machaon.*

With the hope of throwing some light on the question I was recently led to examine the male genitalia of several forms involved, especially the two Nearctic species above mentioned, specimens of which were kindly given to me by Dr. Wm. Barnes and Mr. F. H. Benjamin when I visited Decatur year before last.

The detailed descriptions and illustrations are out of place in this short preliminary note, especially as I intend to extend the examination to other species of the *machaon*-group in order to complete my observations. I merely state here that it has proved entirely impossible for me to separate the following on the basis of genitalic characters: *P. machaon machaon* L. from Germany, *P. machaon hippocrates* Feld. from Japan, *P. zelicaon* Luc., and *P. bairdii* Edw., and form *oregonia* Edw. For comparison, two Oriental species placed by Rothschild under the *machaon*-group were examined, namely, *P. xuthus* L. (Japan) and *P. demoleus* L. (Formosa). It was found that though these two species agree perfectly with *P. machaon* as to all other points of the male genitalia, the character of the valve (*gonopophyses*), especially that of ampulla, was unmistakably peculiar to each species.

In *machaon* (and in *hippocrates, zelicaon, bairdii,* and *oregonia*) the ampulla is situated along the ventral margin of the valve, and it is in the form of a long comb with fine teeth.

In *xuthus* the general plan is the same but the toothed portion of the ampulla is less than one-third the length of that in *machaon,* and is found near the apex of the valve.

In *demoleus* the ampulla is located along the dorsal margin of the valve and near the base, while the valve itself is essentially narrower and more pointed at the apex than in other species.

I am unwilling at this time to go so far as to suggest that *zelicaon* and *bairdii* might be conspecific with *machaon,* as undoubtedly the data at hand do not justify such an action. I feel, however, that we have an interesting taxonomic problem demanding further consideration in the satisfactory placement of these Nearctic forms.

ESPERANZA TEXANA BARBER FOUND IN LOUISIANA (HEMIPTERA COREIDAE).[1]

By H. G. Johnston, Ames, Iowa.

Esperanza texana Barber, Brook. Inst. Sci. Bull. I, no. 9, p. 270 (1906).

One specimen, a male which is evidently this species, was collected by the writer, August 12, 1926, at Delta Point, Louisiana. This species has been reported only from southwest Texas, the type locality. Barber described the species, for which he erected a new genus, from a single male specimen. In his description he states, "The scutellum is imperfect." Since the scutellum is rather distinctive, I offer the following description of it:

> Scutellum distinctly longer than width at base, apex curved upward forming a conspicuous spine, fuscous at tip, basal half of disk moderately convex, somewhat depressed just before the spinose apex; two longitudinal, parallel rows of fuscous punctures along either side of the median line; lateral edges carinate.

[1] Contribution from the Department of Zoology and Entomology, Iowa State College, Ames, Iowa.